

ture, with Kelvin temperature being generally relegated to the scientific domain. Unfortunately, three names now exist to describe the same amount of mass, 1000 kilograms — metric ton (t), tonne (t) and megagram (Mg or one million grams). While the megagram is the correct SI expression, it is not widely recognized and “tonne” seems more likely to prevail in the Canadian literature. For this reason, we have preferred not to express mass in megagrams in this Report.

SI PREFIXES

Many of the SI units with which we work are small measures. The pascal, for example, is a very small

pressure, about equivalent to a dollar bill lying flat on a surface. In comparison, atmospheric pressure at sea level normally falls in the range of 95,000 to 105,000 pascals. To avoid the cumbersome expression of large and small quantities, the SI package includes a system of decimal multiples expressed as word prefixes and added to the unit names. Thus atmospheric pressure becomes 95 to 105 *kilopascals*, the generating capacity at Churchill Falls in Labrador is expressed as 5,225 *megawatts* and Canada’s export of electricity to the United States in 1980 is given as 30,180 *gigawatthours* of energy. Table A-3 presents the full list of SI unit prefixes and gives examples of their use.

Table A-3: SI UNIT PREFIXES

Multiplication Factor	Prefix and Symbol	Example and Symbol
1 000 000 000 000 000 000 = 10 ¹⁸	exa E	exajoules EJ
1 000 000 000 000 000 = 10 ¹⁵	peta P	petajoules PJ
1 000 000 000 000 = 10 ¹²	tera T	terawatts TW
1 000 000 000 = 10 ⁹	giga G	gigawatthours GWh
1 000 000 = 10 ⁶	mega M	megalitres MI
1 000 = 10 ³	kilo k	kilopascals kPa
100 = 10 ²	hecto h	} (a)
10 = 10 ¹	deca da	
0.1 = 10 ⁻¹	deci d	
0.01 = 10 ⁻²	centi c	
0.001 = 10 ⁻³	milli m	millimetres mm
0.000 001 = 10 ⁻⁶	micro μ	micrograms μg
0.000 000 001 = 10 ⁻⁹	nano n	nanoseconds ns
0.000 000 000 001 = 10 ⁻¹²	pico p	picohertz pHz
0.000 000 000 000 001 = 10 ⁻¹⁵	femto f	femtofarads fF
0.000 000 000 000 000 001 = 10 ⁻¹⁸	atto a	attocoulombs aC

(a) Except for the nontechnical reference to “centimetre”, use of these four prefixes is avoided in most circumstances.

Source: After Pedde *et al*, 1978, p. 10.

CONVERSION FACTORS

The following conversion factors are either exact or correct to four significant figures.

Distance

- 1 foot = 0.3048 metre
- 1 metre = 3.281 feet
- 1 statute mile = 1.609 kilometres
- = 0.8690 international nautical mile
- 1 international nautical mile = 1.151 statute miles
- = 1.852 kilometres
- 1 kilometre = 0.6214 statute mile
- = 0.5399 international nautical mile

Area

- 1 square foot = 0.09290 square metre
- 1 square metre = 10.76 square feet
- 1 square mile = 640 acres
- = 2.590 square kilometres
- = 259.0 hectares
- 1 square kilometre = 0.3861 square mile
- = 100 hectares
- = 247.1 acres
- 1 acre = 0.4047 hectare
- 1 hectare = 2.471 acres

Volume

- 1 cubic foot = 0.02832 cubic metre
- 1 cubic metre = 35.31 cubic feet